

Notice of Allowability

Application No.

10/811,119

Examiner

Ernest Unelus

Applicant(s)

OWENS ET AL.

Art Unit

2181

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 10/29/07.
2. ☒ The allowed claim(s) is/are 1,2,8-14,17,18,21,22,24-28,31,33,38 and 41-47.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |


ALFORD KINDRED
SUPERVISORY PATENT EXAMINER

DETAILED ACTION

I. EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Mr. Edmond A. Defrank (Reg. No. 37,814) on December 12, 2007. The examiner proposed amendments to better place the application in condition for allowance, particularly adding the limitation that prior arts fail to teach. Mr. Defrank agreed.

The application has been amended as follows:

3. **Claim 1** (Currently Amended) A method for dynamically processing data, the method comprising the steps of:

determining a sustainable data transfer rate between a data appliance and an external memory medium that is directly connectable to the data appliance by transferring a test file and partial test files at predetermined data transfer rates, the test files containing digital representation of video data between the data appliance and the external memory medium;

establishing an image and video quality of data streaming rate using the test file and the partial test file, wherein a data streaming rate below a predetermined quality of image and video data threshold causes a data transfer error;

using an internal clock with monitoring logic associated with the data appliance to confirm data transfer rates associated with transfers of the test file and to log relative start and

stop times associated with the test files, wherein if a data transfer error occurs, the predetermined data transfer rate is adjusted and the test file is re-transferred until a data transfer error does not occur;

using the test file and the partial test file to select values for operational parameter within the data appliance in response to the sustainable data transfer rate for maximizing the image and video quality of data that can be streamed to the external memory medium;

processing data in accordance with the at least one operational parameter;

wherein selecting values for the operational parameters comprises changing a bit rate, a frame type, and a search area for motion vectors for an identified data compression parameter and changing a value associated with spatial resolution and frame rate for an identified data acquisition parameter.

4. **Claim 9** (Currently Amended) A data appliance, comprising:

an acquisition system configured to acquire data in response to an acquisition parameter;

a processing system coupled to the acquisition system, the processing system configured to transform data in response to a processing parameters;

a memory interface coupled to the processing system, wherein the data appliance configured to select a values associated with acquisition parameters and the processing parameters responsive to a sustainable data transfer rate between the memory interface and an external memory medium that is directly connectable to the data appliance by transferring a test file and partial test files at predetermined data transfer rates, the test files containing a digital representation of video data between the data appliance and the external memory medium;

wherein the processing system uses the test file and the partial test file to establish an image and video quality of data streaming rate and wherein a data streaming rate below a predetermined quality of image and video data threshold causes a data transfer error; and

an internal clock with monitoring logic associated with the data appliance configured to confirm data transfer rates associated with transfers of the test file and to log relative start and stop times associated with the test files, wherein if a data transfer error occurs, the predetermined data transfer rate is adjusted and the test file is re-transferred until a data transfer error does not occur for maximizing the image and video quality of data that can be streamed to the external memory medium;

wherein the data acquisition and processing parameters use the test file and the partial test file and to select values and wherein selecting values include changing a bit rate, a frame type, and a search area for motion vectors for an identified data compression parameter and changing a value associated with spatial resolution and frame rate for an identified data acquisition parameter

5. **Claim 18** (Currently Amended) A system for responding to a data transfer rate, the system configured for use in a data appliance, the system comprising:

means for determining a sustainable data transfer rate for data transfers to/from an external memory medium that directly connects to the data appliance by transferring a test file and partial test files at predetermined data transfer rates, the test files containing a digital representation of video data between the data appliance and the external memory medium;

means for acquiring a data stream;

means for transforming the data stream;

means for establishing an image and video quality of data streaming rate using the test file and the partial test file, wherein a data streaming rate below a predetermined quality of image and video data threshold causes a data transfer error,

means for using the test file and the partial test file to select values for operational parameters associated with the means for acquiring or the means for transforming the data stream in response to the sustainable data transfer rate;

means for using an internal clock with monitoring logic associated with the data appliance to confirm data transfer rates associated with transfers of the test file and to log relative start and stop times associated with the test files, wherein if a data transfer error occurs, the predetermined data transfer rate is adjusted and the test file is re-transferred until a data transfer error does not occur for maximizing the image and video quality of data that can be streamed to the external memory medium; and

wherein selecting values for the operational parameters comprises changing a bit rate, a frame type, and a search area for motion vectors for an identified data compression parameter and changing a value associated with spatial resolution and frame rate for an identified data acquisition parameter.

6. **Claim 24** (Currently Amended) A computer-readable storage medium of a data appliance having stored thereon an executable instruction set, the instruction set, when executed by a processor, directing the processor to perform a method comprising:

retrieving a test file and partial test files at predetermined data transfer rates, the test files containing a digital representation of video data and an initial bit rate;

transferring the test file to an external memory medium that is directly connectable to the data appliance;

establishing an image and video quality of data streaming rate by using the test file and the partial test file, wherein a data streaming rate below a predetermined quality of image and video data threshold causes a data transfer error;

determining if a data transfer error condition exists by using an internal clock with monitoring logic associated with the data appliance to confirm data transfer rates associated with transfers of the test file and by logging relative start and stop times associated with the test files;

when it is the case that no data transfer error exists, recording the bit rate to generate a sustainable data transfer rate;

when it is the case that a data transfer error exists, decreasing the bit rate to generate an interim bit rate less than an initial bit rate by a predetermined amount for a remainder of data transfer and/or subsequent data transfers and repeating the transferring, determining, decreasing, and recording steps until another data transfer error condition occurs or the data transfer is completed so that data transfers and bit rate adjustments repeat until no data error is detected during a transfer of the test file for maximizing the image and video quality of data that can be streamed to the external memory medium; and

selecting values for operational parameters by changing a bit rate, a frame type, and a search area for motion vectors for identified data compression parameters and changing a value associated with spatial resolution and frame rate for identified data acquisition parameters.

7. **Claim 38** (Currently Amended) A digital camera, comprising:

an image acquisition system configured to generate a video data stream;

a data processing system configured to receive and transform the video data stream to generate a compressed data stream;

an external memory interface coupled to the data processing system and configured to feed back a sustainable data transfer rate to one of the image acquisition system and the data processing system, the sustainable data transfer rate established as an image and video quality of data streaming rate using a test file and a partial test file, wherein a data streaming rate below a predetermined quality of image and video data threshold causes a data transfer error, wherein the sustainable data transfer rate is related to the rate at which data can be transferred between the external memory interface and a removable memory card that couples to the external memory interface, wherein the sustainable data transfer rate is determined by transferring the test file and the partial test files at predetermined data transfer rates, the test files containing a digital representation of video data between the data appliance and the external memory medium; and

an internal clock with monitoring logic associated with the data appliance configured to confirm data transfer rates associated with transfers of the test file and to log relative start and stop times associated with the test files, wherein if a data transfer error occurs, the predetermined data transfer rate is adjusted and the test file is re-transferred until a data transfer error does not occur for maximizing the image and video quality of data that can be streamed to the external memory medium;

wherein values are selected for the data processing system including changing a bit rate, a frame type, and a search area for motion vectors for an identified data compression parameter and for the image acquisition system for changing values associated with spatial resolution and frame rate for an identified data acquisition parameter.

The applicant has canceled claims 3-7, 15, 16, 19, 20, 23, 29, 30, 32, 34-37, 39, and 40.

II. RELEVANT ART CITED BY THE EXAMINER

8. The following prior art made of record and not relied upon is cited to establish the level of skill in the applicant's art and those arts considered reasonably pertinent to applicant's disclosure. See **MPEP 707.05(c)**.

9. The following reference teaches a data transfer rate:

Agarwal (US Pat. 5,812,788) discloses changing a bit rate and a search area for motion vectors for an identified data compression parameter and changing values associated with spatial differences and frame rate for an identified data acquisition parameter, but fail to teach changing a frame type and a spatial resolution, together. Agarwal also fail to teach a test file and a partial test file.

The following reference also a data transfer rate:

U.S. PATENT NUMBER

US 6,980,594

US 7,149,825

US 7,007,116

III. ALLOWABLE SUBJECT MATTER

10. The following is an examiner's statement of reasons for allowance: In regards to claims 1, 9, 18, 24, and 38, the prior art of record fails to disclose "wherein selecting values for the operational parameters comprises changing a bit rate, a frame type, and a search area for motion vectors for an identified data compression parameter and changing a value associated with spatial resolution and frame rate for an identified data acquisition parameter".

11. The remaining claims 2, 8, 10-14, 17, 21, 22, 25-28, 31, 33, and 41-47 are allowed by virtue of their dependencies on the independent claims. Hence, the examiner has allowed claims 1, 9, 18, 24, and 38.

12. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

IV. CLOSING COMMENTS

Conclusion

a. STATUS OF CLAIMS IN THE APPLICATION

13. The following is a summary of the treatment and status of all claims in the application as recommended by M.P.E.P. 707.07(i):

a(1) CLAIMS ALLOWED IN THE APPLICATION

14. Per the instant office action, claims 1, 2, 8-14, 17, 18, 21, 22, 24-28, 31, 33, 38, and 41-47 have been allowed.

b. DIRECTION OF FUTURE CORRESPONDENCES

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernest Unelus whose telephone number is (571) 272-8596. The examiner can normally be reached on Monday to Friday 9:00 AM to 5:00 PM.

IMPORTANT NOTE

16. If attempts to reach the above noted Examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Alford Kindred, can be reached at the following telephone number: Area Code (571) 272-4037.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PMR system, see [her//pair-direct.uspto.gov](http://pair-direct.uspto.gov). Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217- 91 97 (toll-free).

December 14, 2007

Ernest Unelus
Patent Examiner
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